

REMARKS

Claims 1-20 are pending in the present application. Claims 16-20 have been withdrawn from consideration. Claims 1-15 have been rejected. No claims have been allowed. Claims 5, 9, 13 and 16-20 have been canceled. Claims 1, 2, 8 and 14 have been amended. New claims 21-25 have been added.

I. Summary of Telephonic Interview

The Examiner is hereby acknowledged and thanked for the courtesy extended during the telephonic interview of November 17, 2005 between Examiner Nguyen and the undersigned attorney. The pending claims, current Office Action and prior art were all discussed during this telephonic interview, with particular focus on that which is clearly taught by the primary prior art references used, U.S. Patent Nos. 6,258,705 to Chien, et al. ("Chien") and 6,452,270 to Huang ("Huang"). Agreement was reached with respect to Chien and Huang not teaching or suggesting all elements of the claims as presently amended, and it was indicated that these claims would be in condition for allowance if amended as has been accomplished herein.

II. Restriction Requirement

Claims 16-20 were withdrawn from further consideration as being drawn to non-elected group. Applicants have canceled these claims herein in the interests of expediting prosecution, and expressly reserve the right to pursue these withdrawn and canceled claims in a future continuation or divisional application.

III. Claim Rejections under 35 U.S.C. § 102

Claim 8 stands rejected under 35 U.S.C. § 102(b) as being anticipated by Chien. In addition, claims 8-11 and 13-15 stand rejected under 35 U.S.C. § 102(b) as being anticipated by

Huang. In particular, the Office Action states, "Huang discloses . . . [an] under bump metallization stack 340(c-d) [that] comprises a plurality of metal or alloy layers 340(c-d), none of which are . . . a titanium layer." In addition, the Office Action states, "Huang discloses . . . a resilient layer 340a." Applicants respectfully traverse these pending § 102(b) rejections, and submit that these rejections have been overcome in any event through the present amendments.

Applicants initially object to the mischaracterization of Huang as disclosing an "under bump metallization stack 340(c-d) [that] comprises a plurality of metal or alloy layers 340(c-d), none of which are . . . a titanium layer." In fact, Huang does disclose a UBM 340, of which layer 340a is titanium. *See, e.g.*, Huang at col. 3, lines 50-67. Because Huang does not disclose an integrated circuit device "wherein each such under bump metallization stack comprises a plurality of metal or alloy layers, none of which are an aluminum layer, a titanium layer or a chromium layer," Applicants respectfully submit that Huang cannot be said to anticipate any of claims 8-11 and 13-15. Withdrawal of the § 102(b) rejections with respect to Huang is thus respectfully requested.

In the interests of furthering prosecution, however, dependent claims 9 and 13 have been canceled and incorporated into independent claim 8, such that this claim now requires "a passivation layer" and a separate "resilient layer" disposed atop the passivation layer. Applicants note that Chien only discloses a passivation layer, and no separate resilient layer. Although the Office Action states that Huang does disclose a resilient layer, and references item 340a, Applicants respectfully submit that this "layer" is actually a titanium adhesion layer. *See, e.g.*, Huang at col. 3, lines 64-67. Because neither Chien nor Huang teaches an integrated circuit device having both a passivation layer and a resilient layer disposed atop the passivation layer, neither reference can be said to anticipate claim 8 or any of the dependent claims therefrom.

Applicants further object to the added bases of rejection with respect to dependent claims 11, 13 and 14. With respect to claim 11, the Office Action states that layer 340b of Huang can

be considered a contact pad. Applicants respectfully traverse. Layer 340b is not a contact pad. With respect to claim 13, Applicants reassert that Huang does not teach a resilient layer, such that the passivation layer can be between a first surface and a resilient layer. Again, layer 340a of Huang is a titanium adhesion layer. With respect to claim 14, it is not clear how the perimeter of the passivation layer via completely encloses the perimeter of any alleged resilient layer via, such as the via formed by layer 340a. These vias appear to be equal in size, such that neither perimeter can be said to completely enclose the other. Applicants respectfully submit that this claim element is not arguably present in Huang.

IV. Claim Rejections under 35 U.S.C. § 103

Claim 1 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Chien alone. Claims 1-7 and 12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Huang alone. Applicants respectfully traverse these pending § 103(a) rejections at least in part, and submit that these rejections have been overcome in any event through the present amendments.

Applicants initially respectfully object to the Office Action assertion that “Chien discloses . . . a resilient layer 120,” and submit that this is not the case. Layer 120 of Chien is described only generically as a passivation layer, and Chien never provides any material basis for concluding that this layer is resilient. Because no resilient layer is disclosed in Chien, it is respectfully submitted Chien cannot be said to render claim 1 as obvious. Accordingly, it is respectfully requested that the pending § 103(a) rejection over Chien alone be withdrawn.

As in the case of claim 8 above, however, dependent claim 5 has been canceled and incorporated into independent claim 1 in the interests of furthering prosecution, such that this claim now also requires “a passivation layer” and a separate “resilient layer” disposed atop the passivation layer. As noted previously, Chien only discloses only one such layer 120, while Huang discloses only one such layer 330. Because neither reference discloses both a passivation

layer and a resilient layer, much less such layers arranged as specified by the present claims, these references cannot be said to render claim 1 or any of the pending claims as obvious.

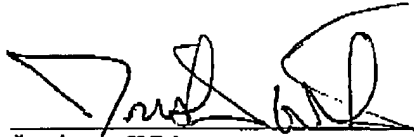
V. New claims

Claims 21-25 are new. Applicants respectfully submit that no new matter has been introduced through the addition of these claims. Support for these new claims and for all claim amendments made herein can be found throughout the original specification and claims as filed. In particular, support can be found at, for example, paragraphs 17, 26, and 30-31 of the written description as filed, as well as Figures 3A-3E and originally filed claims 1-16.

CONCLUSION

Applicants respectfully submit that all claims are in proper form and condition for patentability, and thus request a Notification of Allowance to that effect. It is believed that no fees are due at this time. Should any fee be required for any reason related to this document, however, then the Commissioner is hereby authorized to charge said fee to Deposit Account No. 50-0388, referencing Docket No. NSC1P284. The Examiner is respectfully requested to contact the undersigned attorney at the telephone number below with any questions or concerns relating to this document or application.

Respectfully submitted,
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November 17, 2005

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NSC1P284

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